



[Home](#) | [Search](#) | [Sitemap](#) | [Contact](#)

National Institutes of Health

National Institute of Child  
Health & Human Development[About NICHD](#) | [News & Events](#) | [Health Information & Media](#) | [Funding by NICHD](#) | [Intramural Research](#)  
[Epidemiology, Statistics & Prevention](#) | [Employment & Fellowships](#) | [Research Resources](#)[Women's Health](#) - [Research Areas](#) - [Disorders and Treatments](#)**Disorders Associated with Infertility**

The NICHD funds and conducts research on many disorders that affect a woman's ability to get pregnant. Some of these conditions include:

Polycystic Ovary Syndrome (PCOS)  
Endometriosis  
Premature Ovarian Failure (POF)/Ovarian Insufficiency  
Uterine Fibroids

**Polycystic Ovary Syndrome (PCOS)**

PCOS is the most common cause of female infertility. A woman's ovaries have **follicles**, which are tiny, fluid-filled sacs that hold the eggs. When an egg is mature, the follicle breaks open to release the egg so it can travel to the uterus for fertilization. In women with PCOS, immature follicles bunch together to form large cysts or lumps. The eggs mature within the bunched follicles, but the follicles don't break open to release them. As a result, women with PCOS often don't have menstrual periods, or they only have periods now and then. Because the eggs are not released, most women with PCOS have trouble getting pregnant. Researchers estimate that 5 percent to 10 percent of women in the United States have PCOS.

Women with PCOS may also have other health problems, such as abnormally high levels of insulin, obesity, high blood pressure, and heart disease. A small number of these women will also gain weight and notice an increase in their hair growth.

Although researchers are still trying to learn about this disease, and to find ways to treat the infertility associated with PCOS, there have been some promising leads. One group of NICHD-supported researchers may have found a possible treatment for the infertility related to PCOS. To learn more about this and other research findings, read the news releases on PCOS.

In 2000, the NICHD, the National Institute of Environmental Health Sciences, the ORWH, and the NIH Office of Rare Diseases, with support from private organizations, held a meeting, Polycystic Ovary Syndrome: Basic Biology and Clinical Interventions to discuss and communicate the most up-to-date information about PCOS, its causes, and its treatments.

The NICHD's Reproductive Sciences Branch, through its Reproductive Medicine Network (RMN) is currently conducting a clinical trial for the treatment of infertility related to PCOS. The RMN Web site provides more information on this trial and on the RMN itself. In addition, the NIH is conducting a number of clinical trials on different aspects of PCOS.

The National Library of Medicine provides general health information about PCOS. The national non-profit organization, PCOStrategies, Inc.™ also provides patient information on this topic.

[Women's Health Home](#)[Research Areas](#)

-Pregnancy and Birth  
-Disorders and Treatments

- [Gynecological Disorders](#)
- **Disorders Associated with Infertility**
- [Sexually Transmitted Diseases](#)
- [HIV/AIDS in Female Populations](#)
- [Other Disorders](#)
- [Selected Treatments](#)

[Clinical Trials](#)[News Releases and Publications](#)[Women's Health Events](#)[Information for Researchers and Health Care Professionals](#)[Additional Resources](#)[Contact the NICHD](#)

## Endometriosis

Endometriosis occurs when tissue like that which lines the inside of the uterus grows outside the uterus. The two most common symptoms, pain and infertility, can deeply affect a woman's quality of life. In many cases, women who receive treatment for their endometriosis pain are able to get pregnant. But this is not the case for all women. Researchers estimate that nearly 5.5 million women in North America have endometriosis.

Endometriosis is **not** a cancerous condition. Also, current research does not prove an association between endometriosis and uterine, cervical, endometrial, or ovarian cancers.

The NICHD conducts and supports a great deal of research on endometriosis and on possible treatments for the condition. The NICHD's publications, *Endometriosis* and *La Endometriosis (Spanish)*, describe what is currently known about the condition and outline some possible treatments.

In addition, the NICHD joined other NIH Institutes in conducting the *Workshop on Endometriosis: Emerging Research and Intervention Strategies*, in April 2001. The results from this workshop were published in March 2002, in the *Annals of the New York Academy of Sciences*, at <http://www.annalsnyas.org/content/vol955/>.

In July 2003, NICHD-supported researchers identified a possible cause of infertility that may affect women with endometriosis. Read the press release [on this finding](#).

Currently, the NICHD and other Institutes are supporting several clinical trials related to endometriosis.

You can also contact the Endometriosis Association for patient information about the condition, and to learn about support groups for women who have endometriosis.

**NEW** The NIH is currently working with the Endometriosis Association to identify women to participate in a research study about pain related to endometriosis. For information on the study, visit <http://endometriosis.nichd.nih.gov>.

## Premature Ovarian Failure (POF)/Ovarian Insufficiency

Health care providers use the term POF to describe a stop in normal functioning of the ovaries in a woman under the age of 40. (Women's ovary function naturally begins to decline at age 40). In POF, the ovaries stop making eggs and stop making certain hormones. An estimated 250,000 women under age 40 have POF in the United States.

The most common first symptom of POF is having irregular periods. Health care providers sometimes overlook irregular or skipped periods as being related to stress. But a woman's monthly cycle is actually an important sign of her health, in the same way that blood pressure or temperature are signs of health. If you have irregular periods or skip periods, you should tell your health care provider, so that he or she can begin to find the cause of these problems.

Women with POF often have difficulty becoming pregnant because their ovaries aren't working correctly. There is currently no proven medical treatment that improves a woman's ability to have a baby naturally if she

has POF. But, between 5 percent and 10 percent of women with POF do become pregnant, even though they have not had any fertility treatment. Sometimes pregnancy can occur decades after the initial diagnosis. Researchers cannot explain why some women with POF get pregnant, while others do not.

Women with POF are at greater risk for certain other health conditions, including Addison's disease, a condition in which the body does not respond well to physical stresses. This condition can be dangerous for women who don't know they have it. NICHD-supported researchers are working to learn more about POF and Addison's disease; these efforts include developing a test for Addison's disease. To learn more, read the NICHD news releases about POF.

Women with POF are also at greater risk for osteoporosis. Estrogen is key to your body's ability to reach its peak bone mass and to preserve bone mineral density. According to the *NIH Consensus Development Conference on Osteoporosis: Prevention, Diagnosis, and Therapy* these factors are just as important in the development of osteoporosis as age-related bone loss is. Women who lack proper levels of estrogen, like those women who have POF, are at increased risk for the bone disease, and at much younger ages than would be expected. The NICHD, in conjunction with other federal agencies and organizations, is holding a scientific meeting on May 22, 2003 to explore this area of women's health. The proceedings from the meeting will be published later this year.

The NICHD offers a booklet, *Do I Have Premature Ovarian Failure (POF)?* that describes what is currently known about POF, what treatments are available, and what research is being conducted on this topic. The free booklet also provides contacts and resources that can offer more information about POF.

In addition, the NICHD and other Institutes are conducting several clinical trials related to POF. Within the NICHD, the Unit of Gynecologic Endocrinology, part of the NICHD Division of Intramural Research manages several POF research and research studies. You can contact the Unit directly at 1-877-206-0911.

The POF Support Group also provides patient information about POF and explains how to find or join a POF support group in your area.

### Uterine Fibroids

Uterine fibroids are the most common, non-cancerous tumors in women of childbearing age. These tumors are made of muscle cells and other tissues that grow within the wall of the uterus. Fibroids can grow in different locations, including:

- Just underneath the lining of the uterus, called **submucosal** (sub-myoo-KO-sul)
- In between the muscles of the uterus, called **intramural** (in-tra-MYOO-rel)
- On the outside of the uterus, called **subserosal** (sub-sir-OH-sul)

Uterine fibroids are the cause of more than 200,000 hysterectomies each year.

The most common symptoms of fibroids are heavy bleeding or painful

periods, bleeding between periods, a "full" feeling in the lower abdomen (sometimes called pelvic pressure), and urinating often. In some cases, fibroids may make it difficult for a woman to get pregnant naturally, although researchers don't know exactly why.

Uterine fibroids are **not** cancerous, nor are they associated with cancer. In very rare instances, less than 0.1 percent of cases, fibroids do develop into cancer.

The NICHD is studying the causes and characteristics of uterine fibroids, in an effort to find new treatments for the condition. The Institute's publications, *Uterine Fibroids* and *Fibromas Uterinos (Spanish)*, provide patient information about this condition.

In 2001, NICHD-supported researchers made advances in finding a cause for uterine fibroids. The Institute is also supporting research on innovative treatments for fibroids, including uterine fibroid embolization (UFE), a treatment that recently received approval for use by the Food and Drug Administration. Although UFE has been approved for use as a treatment for fibroids, the American College of Obstetricians and Gynecologists indicates that more data is needed on the safety and effectiveness of UFE for treating fibroids before it can be considered a standard of care.

The NICHD and other Institutes are conducting clinical trials related to uterine fibroids.

You can also contact the National Uterine Fibroid Foundation for patient information about uterine fibroids.

[NICHD Home](#) | [NIH Home](#) | [DHHS Home](#) | [NICHD Disclaimer](#) | [Accessibility](#) | [Top of Page](#)  
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